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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,016	09/07/2000	Shankar Iyer	UDN0003	1210

7590

10/24/2003

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EXAMINER

ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/657,016

Applicant(s)

IYER ET AL.

Examiner

David E. England

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 – 15 are presented for examination.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the dynamic hop count in the claims below must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the Round Trip Times (RTT) as disclosed in claims 1,2, 6, 7, 11, 12 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the higher level server of claims 3, 8, 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 2, 6, 7, 11, 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term of “dynamic hop count” is not specifically describe as to what and/or how it is created/measured.

6. Claims 5, 10, 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term of “weighted combination” is not specifically described in the specification as to how or what is the function of a “weighted combination”.

7. Claims 3, 8, 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term of “higher level server” is not specifically described in the specification as to what specifically and/ or how a server is of “higher level”.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claims 5, 10, 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 5, 10, 15 are recites the limitation "the hop counts". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claims 1, 2, 4, 6, 7, 9, 11, 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Shah et al. U.S. Patent No. 6292832 (hereinafter Shah).

13. Referencing claim 1, as understood by the Examiner, Shah teaches a process for determining latency between multiple servers and a client across a network in a computer environment, comprising the steps of:

14. receiving a request for latency metrics on a content server, (e.g. col. 2, line 64 – col. 3, line 35);

15. wherein said latency metric request specifies a particular client, (e.g. col. 16, line 20 – col. 17, line 40);

16. providing a latency management table, (e.g. col. 11, line 52 – col. 12, line 16);

17. wherein said latency management table comprises a list of IP addresses along with corresponding

Border Gateway Protocol (BGP) hop counts, dynamic hop counts, and Round Trip Times (RTT), (e.g. col. 8, lines 17 – 30 & col. 13, lines 13 – 33 & col. 15, lines 36 – 64);

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18. looking up the latency metric for said client in said latency management table, (e.g. col. 1, line 46 – col. 2, line 38 & col. 8, line 48 – col. 9, line 44 & col. 15, lines 36 – 64);
19. sending said latency metric to the requesting server, (e.g. col. 1, line 46 – col. 2, line 38 & col. 8, line 48 – col. 9, line 44);
20. wherein the BGP hop count for said client in said latency management table is used for said latency metric upon the first request for said client, (e.g. col. 3, lines 24 – 67); and
21. wherein the dynamic hop count and RTT data for said client in said latency management table are used for said latency metric for subsequent requests for said client, (e.g. col. 1, line 46 – col. 2, line 38 & col. 8, line 48 – col. 9, line 44 & col. 15, lines 36 – 64).
22. Referencing claim 2, as understood by the Examiner, Shah teaches sending periodic latency probes to the IP addresses in said latency management table, (e.g. col. 15, lines 35 – 64 & col. 16, line 42 – col. 17, line 10 & col. 17, line 51 – col. 18, line 17);
23. receiving response packets for said latency probes, (e.g. col. 15, lines 35 – 64 & col. 16, line 42 – col. 17, line 10 & col. 17, line 51 – col. 18, line 17); and
24. recording the dynamic hop count and latency (RTT) data in said latency management table, (e.g. col. 8, lines 17 – 59 & col. 14, lines 34 – 57 & col. 15, line 35 – 64).
25. Referencing claim 4, as understood by the Examiner, Shah teaches receiving requests for a content server address from said client, (e.g. col. 2, line 64 – col. 3, line 35 & col. 8, lines 17 – 30 & col. 13, lines 13 – 33 & col. 15, lines 36 – 64);
26. sending a latency metric request to the appropriate content servers, (e.g. col. 2, line 64 – col. 3, line 35 & col. 8, lines 17 – 30 & col. 13, lines 13 – 33 & col. 15, lines 36 – 64);

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27. receiving latency metric data from said content servers, (e.g. col. 2, line 64 – col. 3, line 35 & col. 8, lines 17 – 30 & col. 13, lines 13 – 33 & col. 15, lines 36 – 64);
28. determining the optimal content server for said client, (e.g. col. 8, line 48 – col. 9, line 5 & col. 10, line 43 – col. 12, line 16 & col. 15, line 46 – col. 16, line 20); and
29. sending said optimal content server's address to said client, (e.g. col. 8, line 48 – col. 9, line 5 & col. 10, line 43 – col. 12, line 16 & col. 15, line 46 – col. 16, line 20).
30. Claims 6, 7, 9, 11, 12 and 14 are rejected for similar reasons stated above.

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claims 3, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah (6292832) in view of what is well known in the art.
33. Referencing claim 3, as understood by the Examiner, Shah teaches all that is described above but does not specifically teach periodic latency probes are sent to a higher level server of a client by masking said client's IP address in said latency management table.
34. Examiner takes Official Notice (see MPEP § 2144.03) that "masking said client's IP address" in a computer networking environment was well known in the art at the time the invention was made.
35. It would have been obvious to one of ordinary skill in the art at the time the inventions was made to utilize masking said client's IP address in said latency management table with Shah because this will add

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security to a network and also in the act of transmitting an IP address. Masking an address allows the users to hide or “mask” parts of the address to hackers or other internet users that might try to find an IP address so to get access to that IP address’s device.

36. Claims 8 and 13 are rejected for similar reasons as stated above.

37. Claims 5, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shah (6292832) in view of McCanne et al. (6415323) (hereinafter McCanne).

38. As per claim 5, as understood by the Examiner, Shah teaches all that is described above that is in association with claim 5 and also teaches determining step gathers the expected latency metrics and said latency metric data in a weighted combination with the RTT in said latency metric data to determine which latency metric data indicates the optimal content server, (e.g. col. 9, line 44 – col. 10, line 21). But does not teach using the inverse relationship of the hop counts. McCanne teaches using the inverse relationship of the hop counts, (e.g. col. 18, lines 35 – 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine McCanne with Shah because using an algorithm to find the optimum path for a client would insure that the client utilizes the network to the fullest capability for the fastest delivery of information on the networks.

39. Claims 10 and 15 are rejected for similar reasons as stated above.

Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

41. a. Gifford U.S. Patent No. 6052718 discloses Replica routing.

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42. b. Colby et al. U.S. Patent No. 6449647 discloses Content-aware switching of network packets.
43. c. Kramer et al. U.S. Patent No. 6546014 discloses Method and system for dynamic bandwidth allocation in an optical access network.
44. d. Phillips U.S. Patent No. 6118765 discloses System method and computer program product for eliminating unnecessary retransmissions.
45. e. Y. Rekhter IBM Corp. discloses RFC 1265 – BGP Protocol Analysis.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 703-305-5333. The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is none.

David E. England
Examiner
Art Unit 2143

De



BUNJOB JAROENCHANANT
PRIMARY EXAMINER